

SENATE No. 472

The Commonwealth of Massachusetts

PRESENTED BY:

Marc R. Pacheco

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act providing for the establishment of a comprehensive adaptation management plan in response to climate change.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Marc R. Pacheco</i>	<i>First Plymouth and Bristol</i>	
<i>Jay R. Kaufman</i>	<i>15th Middlesex</i>	<i>1/26/2017</i>
<i>Lori A. Ehrlich</i>	<i>8th Essex</i>	<i>1/26/2017</i>
<i>Chris Walsh</i>	<i>6th Middlesex</i>	<i>1/26/2017</i>
<i>James M. Cantwell</i>	<i>4th Plymouth</i>	<i>1/27/2017</i>
<i>Michael D. Brady</i>	<i>Second Plymouth and Bristol</i>	<i>1/27/2017</i>
<i>Marjorie C. Decker</i>	<i>25th Middlesex</i>	<i>1/30/2017</i>
<i>Thomas J. Calter</i>	<i>12th Plymouth</i>	<i>1/30/2017</i>
<i>Sal N. DiDomenico</i>	<i>Middlesex and Suffolk</i>	<i>1/31/2017</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	<i>1/31/2017</i>
<i>Frank I. Smizik</i>	<i>15th Norfolk</i>	<i>1/31/2017</i>
<i>Kay Khan</i>	<i>11th Middlesex</i>	<i>1/31/2017</i>
<i>Robert M. Koczera</i>	<i>11th Bristol</i>	<i>2/1/2017</i>
<i>Peter V. Kocot</i>	<i>1st Hampshire</i>	<i>2/1/2017</i>
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>	<i>2/1/2017</i>
<i>Barbara A. L'Italien</i>	<i>Second Essex and Middlesex</i>	<i>2/2/2017</i>
<i>Carolyn C. Dykema</i>	<i>8th Middlesex</i>	<i>2/2/2017</i>

<i>Patricia D. Jehlen</i>	<i>Second Middlesex</i>	<i>2/2/2017</i>
<i>Patricia A. Haddad</i>	<i>5th Bristol</i>	<i>2/2/2017</i>
<i>Daniel J. Ryan</i>	<i>2nd Suffolk</i>	<i>2/2/2017</i>
<i>Paul A. Schmid, III</i>	<i>8th Bristol</i>	<i>2/2/2017</i>
<i>Michael O. Moore</i>	<i>Second Worcester</i>	<i>2/3/2017</i>

SENATE No. 472

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE SENATE, NO. 451 OF 2015-2016.]

The Commonwealth of Massachusetts

**In the One Hundred and Ninetieth General Court
(2017-2018)**

An Act providing for the establishment of a comprehensive adaptation management plan in response to climate change.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. The General Laws are hereby amended by inserting after chapter 21O the
2 following chapter:-

3 CHAPTER 21P.

4 COMPREHENSIVE ADAPTATION MANAGEMENT ACTION PLANNING IN
5 RESPONSE TO CLIMATE CHANGE

6 Section 1. As used in this chapter, the following words shall have the following meanings
7 unless the context clearly requires otherwise:

8 “Adaptation”, a response and process of adjustment to actual or expected climate change
9 and its effects that seeks to increase the resiliency and reduce the vulnerability of the

10 commonwealth’s built and natural environments and seeks to moderate or avoid harm or exploit
11 beneficial opportunities to reduce the safety and health risks that vulnerable human populations
12 and resources may encounter due to climate change.

13 “Executive office”, the executive office of energy and environmental affairs.

14 “Hazard mitigation”, an effort using nonstructural measures to reduce loss of life and
15 property by lessening the impacts of major storms.

16 “Plan”, the comprehensive adaptation management action plan.

17 “Public utility”, as defined in clause (7) of paragraph (j) of section 5 of chapter 21E.

18 “Resilience”, the ability to respond and adapt to changing conditions and withstand and
19 rapidly recover with minimal damage from disruption due to climate-related events and impacts
20 which may include, but shall not be limited to, shoreline improvement, seawall maintenance and
21 expansion, infrastructure improvement or innovative building design and construction.

22 “State agency”, a legal entity of state government established by the legislature as an
23 agency, board, bureau, department, office or division of the commonwealth with a specific
24 mission that may either report to an executive office or secretariat or be independent division or
25 department.

26 “State authority”, a body politic and corporate constituted as a public instrumentality of
27 the commonwealth and established by an act of the legislature to serve an essential governmental
28 function; provided, however, that “state authority” shall include energy generation and
29 transmission, solid waste, drinking water, wastewater and stormwater and telecommunication
30 utilities serving areas identified by the executive office as subject to material risk of flooding;

31 provided further, that unless designated as such by the secretary of energy and environmental
32 affairs, “state authority” shall not include: (i) a state agency; (ii) a city or town; (iii) a body
33 controlled by a city or town; or (iv) a separate body politic for which the governing body is
34 elected, in whole or in part, by the general public or by representatives of member cities or
35 towns.

36 Section 2. (a) The secretary of energy and environmental affairs and the secretary of
37 public safety and security, in consultation with appropriate secretariats as determined by the
38 governor, shall develop, draft, adopt and revise at least once every 10 years, a comprehensive
39 adaptation management action plan. The plan shall encourage and provide guidance to state
40 agencies, state authorities and regional planning agencies to proactively address the
41 consequences of climate change. The plan shall also provide a process for local and regional
42 climate vulnerability assessment and adaptation strategy development and implementation and
43 may encourage and provide guidance to cities and towns to proactively address the consequences
44 of climate change. The plan and any updates shall be filed with clerks of the house of
45 representatives and senate. The plan shall be developed with guidance from the comprehensive
46 adaptation management action plan advisory commission established in section 3.

47 Upon the adoption of the plan, all certificates, licenses, permits, authorizations, grants,
48 financial obligations, projects, actions and approvals for any proposed projects, uses or activities
49 in and by a state agency or state authority shall be consistent, to the maximum extent practicable,
50 with the plan.

51 (b) The plan shall include, but not be limited to: (i) a statement setting forth the
52 commonwealth’s goals, priorities and principles for ensuring effective prioritization for the

53 resiliency, preservation, protection, restoration and enhancement of the commonwealth's built
54 and natural infrastructure; (ii) a commitment to sound management practices which shall take
55 into account the existing natural, built and economic characteristics of the commonwealth's most
56 vulnerable areas and human populations; (iii) data on existing and projected climate trends,
57 according to the best and latest data, forecasting and models including, but not limited to,
58 changes for temperature, precipitation, drought, sea level, and inland and coastal flooding; (iv) a
59 statement on the preparedness and vulnerabilities in the commonwealth's emergency response
60 and infrastructure resiliency including, but not limited to, energy, transportation,
61 communications, health and other systems; (v) an assessment of economic vulnerability,
62 including but not limited to, local businesses in high-risk communities; and (vi) an assessment of
63 natural resources and ecosystems, identifying vulnerabilities and strategies to preserve, protect,
64 restore and enhance.

65 Section 3. (a) There shall be a comprehensive adaptation management action plan
66 advisory commission to assist the secretary of energy and environmental affairs and the secretary
67 of public safety and security in developing the comprehensive adaptation management plan. The
68 commission shall consist of: the secretary of the energy and environmental affairs or a designee;
69 the secretary of public safety and security or a designee; 1 person from the University of
70 Massachusetts with expertise in climate science chosen by the university; and 18 persons to be
71 appointed by the secretary of energy and environmental affairs and the secretary of public safety
72 and security, 1 of whom shall have expertise in transportation and built infrastructure, 1 of whom
73 shall have expertise in commercial, industrial and manufacturing activities, 1 of whom shall have
74 expertise in commercial and residential property management and real estate, 1 of whom shall
75 have expertise in energy generation and distribution, 1 of whom shall have expertise in wildlife

76 and land conservation, 1 of whom shall have expertise in water supply and conservation, 1 of
77 whom shall have expertise in the outdoor recreation economy, 1 of whom shall have expertise in
78 economic and environmental justice, 1 of whom shall have expertise in ecosystem dynamics, 1
79 of whom shall have expertise in coastal zones and oceans, 1 of whom shall have expertise in
80 rivers and wetlands, 1 of whom shall be a professional engineer, 1 of whom shall be from a
81 statewide nonprofit land and water conservation organization; 1 of whom shall have expertise in
82 historic and cultural resources, 1 of whom shall be a property owner in a coastal community, 1 of
83 whom shall have expertise in small business administration, 1 of whom shall be a certified
84 floodplain manager and 1 of whom shall have expertise in local government. The secretary of
85 energy and environmental affairs and the secretary of public safety and security shall jointly
86 designate an appointee to serve as chair.

87 (b) The advisory commission shall prepare a report:

88 (1) identifying: (i) how the secretary of energy and environmental affairs can support
89 existing adaptation, resilience and hazard mitigation efforts of state agencies, such as the
90 StormSmart Coasts program at the office of coastal zone management, the coastal erosion
91 commission report, BioMap2 at the department of fish and game and vulnerability studies being
92 conducted by the department of public health and the Massachusetts Department of
93 Transportation; (ii) recommendations of new actions that may be implemented immediately
94 using existing state agency legal authority, state resources and funding based upon the
95 recommendations included in the climate change adaptation report prepared pursuant to section 9
96 of chapter 298 of the acts of 2008 and existing climate change action plans prepared by regional
97 planning agencies and municipalities; (iii) unilateral actions that can be taken by the executive
98 branch to increase climate adaptation, resilience and hazard mitigation including, but not limited

99 to, executive orders and policy directives issued by the governor or policies, regulations and
100 guidance by the secretary of energy and environmental affairs; (iv) recommendations of new
101 climate resilience and adaptation actions that require legislative authority, state resources or
102 funding, including identification of funds to leverage opportunities through public-private
103 partnerships; and (v) the cost of climate adaptation within the 10-year term of the plan, based
104 upon the adaptation actions recommended in this report, existing climate action plans, including
105 those prepared by regional planning councils, municipalities and state agency cost assessments
106 outlined in section 4; and

107 (2) providing information relative to the risks associated with climate change, both means
108 and extremes, including, but not limited to, the risks associated with changes in temperature,
109 drought, increased precipitation and coastal and inland flooding identified by the advisory
110 committee on flood risks created by climate change established in section 39 of chapter 52 of the
111 acts of 2014.

112 Section 4. Each state agency, state authority and public utility, as designated by the
113 secretary of environmental affairs and the secretary of public safety and security, shall, in
114 consultation with the executive office, develop and update at least once every 10 years a
115 vulnerability and adaptation assessment for their portfolio of assets based on the relevant
116 scientific data and information collected by the comprehensive adaptation management action
117 plan advisory commission pursuant to section 3. The vulnerability assessments shall classify the
118 economic losses over time associated with each major asset for the relevant climate risks
119 including, but not limited to, coastal and inland flooding and extreme heat, as unacceptable,
120 noncritical or immaterial. For assets exposed to material risk of unacceptable losses, the
121 vulnerability assessment shall include order-of-magnitude cost-estimates for: (i) measures to

122 protect the assets; (ii) measures to make the assets resilient; and (iii) removal and relocation of
123 the assets from exposed areas. Estimates shall also be prepared for the economic, social and
124 environmental damages if no adaptation actions are taken. Qualitative cost-benefit discussions of
125 projected social impacts of flood prevention versus flood resilience shall also be included in the
126 vulnerability assessment.

127 Section 5. The secretary of energy and environmental affairs and the secretary of public
128 safety and security shall, at least 6 months before establishing a comprehensive plan pursuant to
129 this chapter, provide for public access to the draft plan in electronic and printed copy form and
130 shall provide for a public comment period, which shall include at least 5 public hearings across
131 the commonwealth. The secretary of energy and environmental affairs and the secretary of public
132 safety and security shall publish notice of any public hearing in the Environmental Monitor at
133 least 30 days but not more than 35 days before the date of a hearing. A notice of a public hearing
134 shall also be placed, at least once each week for the 4 consecutive weeks preceding the hearing in
135 newspapers with sufficient circulation to notify the residents of the municipality in which the
136 hearings shall be held. The public comment period shall remain open for at least 60 days from
137 the date of the final public hearing. After the close of the public comment period, the secretary of
138 energy and environmental affairs and the secretary of public safety and security shall issue a
139 final plan and shall file the plan, together with legislation necessary to implement the plan, if
140 any, by filing the same with the clerks of the house of representatives and senate.

141 Section 6. The plan shall be consistent with this chapter and all other general and special
142 laws. Nothing in the plan shall be construed to supersede existing general or special laws or to
143 confer any rights, or adversely impact existing rights, or remedies in addition to those conferred
144 by general or special laws existing on the effective date of this chapter.

145 Section 7. The secretary of energy and environmental affairs shall develop and support a
146 regional comprehensive climate change adaptation management action plan grant program which
147 shall consist of financial assistance to regional planning agencies to develop and implement
148 comprehensive cost-effective adaptation management action plans at the regional level of
149 government. Funds shall be expended from item 2000-7070 of section 2A of chapter 286 of the
150 acts of 2014 for the grant program and the department of energy resources may make available
151 monies from amounts collected by the Department of Energy Resources Credit Trust Fund
152 established in section 13 of chapter 25A of the General Laws for the grant program. Regional
153 comprehensive adaptation management action plans shall include, but not be limited to: (i)
154 technical planning guidance for adaptive municipalities through a step-by-step process for
155 regional climate vulnerability assessment and adaptation strategy development; (ii) development
156 of a definition of regional impacts by supporting municipalities conducting climate vulnerability
157 assessments; (iii) a demonstrated understanding of regional characteristics, including regional
158 environmental and socioeconomic characteristics; and (iv) prioritization of protecting identified
159 inland and coastal vulnerable locations not yet built upon. The grants shall advance statewide,
160 regional and local efforts to adapt land use, zoning, infrastructure, policies and programs to
161 reduce the vulnerability of the built and natural environment to changing environmental
162 conditions as a result of climate change and for the development and implementation of an
163 outreach and education program in low income and urban areas about climate change and the
164 effects of climate change.

165 Section 8. The executive office of energy and environmental affairs, in consultation with
166 the division of capital asset management and maintenance, may acquire by purchase from willing
167 sellers land abutting or adjacent to areas subject to the ebb and flow of the tide or on barrier

168 beaches or in velocity zones of flood plain areas, on which structures have been substantially and
169 repeatedly damaged by severe weather, for conservation and recreation purposes, including those
170 rejected by the Pre-Disaster Mitigation Grant Program and the Hazard Mitigation Grant Program
171 administered by the Federal Emergency Management Agency.

172 Prior to the acquisition of any land under this section, the executive office shall develop a
173 conservation and recreation management plan and coastal erosion mitigation and management
174 plan for any such land after consultation with the municipality in which the land is located. The
175 plan shall set forth the priority, description and location of lands to be acquired and any land
176 management agreement reached between the agency and municipality that provides for local
177 responsibility to carry out the development and management of the property. Land acquired
178 pursuant to this section shall contain a deed restriction stating that the land shall be used for
179 conservation and recreation purposes only.

180 No land shall be acquired under this section until after a public hearing has been held by
181 the executive office in the municipality in which the land is located to consider the management
182 plan. The executive office shall notify the mayor and city council in a city or the board of
183 selectmen, planning board and conservation commission, if any, of a town not later than 10 days
184 prior to any such hearing.

185 If the executive office deems it necessary to make appraisals, surveys, soundings,
186 borings, test pits or other related examinations to obtain information to carry out this section, the
187 executive office or its authorized agents or employees may, after due notice by registered mail,
188 enter upon lands, water and premises, not including buildings, to make such appraisals, surveys,
189 soundings, borings, test pits or other related examinations and such entry shall not be a trespass.

190 The executive office shall provide reimbursement for any injury or actual damages resulting to
191 the lands, waters and premises caused by any act of the executive office or its authorized agents
192 or employees and shall, so far as possible, restore the lands to the same condition as prior to
193 making such appraisals, surveys, soundings, borings, test pits or other related examinations.

194 Section 9. (a) The executive office of energy and environmental affairs, acting for and on
195 behalf of the commonwealth, may lease to a municipality or nonprofit organization, on a form
196 approved by the attorney general, for not more than 25 years, certain property acquired by the
197 commonwealth pursuant to section _ or by the Federal Emergency Management Agency under
198 42 U.S.C. § 4001, as amended, for use as conservation and recreation areas. Leases shall be in
199 such form and contain such provisions as the secretary of energy and environmental affairs, in
200 consultation with the division of capital asset management and maintenance, shall determine,
201 including such terms and conditions as necessary to comply with laws relative to the protection
202 of barrier beaches. Lands shall be leased upon the express conditions that the land shall be used
203 for conservation and recreation purposes only, that no permanent structures shall be erected and
204 a reversionary clause that requires the lease to be terminated if the leased land is used in
205 violation of any law relative to barrier beaches or condition of the lease.

206 (b) In consideration for the granting of a lease authorized in subsection (a), the lessee
207 municipality or nonprofit organization shall agree to maintain the acquired land as a clean, safe
208 and orderly conservation or recreation area.

209 Section 10. Pursuant to its authority under section 40 of chapter 131 of the General
210 Laws, the commissioner of environmental protection shall promulgate rules regulating the
211 dredging, filling or altering of land subject to coastal storm flowage.

212 Section 11. The executive office of energy and environmental affairs and the executive
213 office of public safety and security may expend such sums as may be available from any
214 account, appropriation or fund available to the respective executive offices or to any agency
215 within those executive offices to carry out chapter 21P of the General Laws, including expenses
216 in connection with the department’s responsibilities under said chapter 21P and the cost of
217 planning and for the development, redevelopment or improvement of land under said chapter
218 21P.

219 Section 12. The regulations required pursuant to section 10 shall be promulgated not later
220 than 180 days after the effective date of this act.

221 Section 13. The comprehensive adaptation management action plan advisory commission
222 shall complete the first report required by subsection (b) of section 3 of chapter 21P of the
223 General Laws not later than January 1, 2018 and shall complete a revised report at least once
224 every 10 years thereafter.

225 Section 14. The first comprehensive adaptation management action plan required by
226 section 2 of chapter 21P of the General Laws shall be completed not later than January 1, 2019.

227 SECTION 2. Section 16 of chapter 298 of the acts of 2008 is hereby amended by striking
228 out, in lines 3 and 4, the words “, and shall expire on December 31, 2020.